

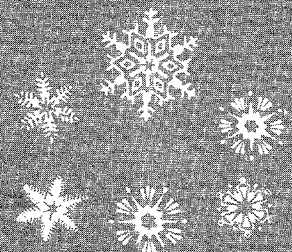
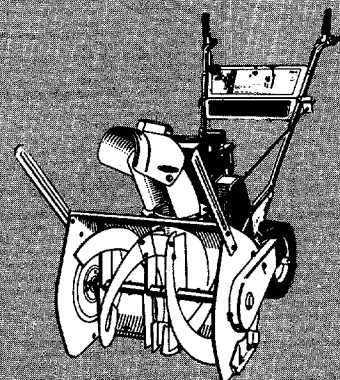
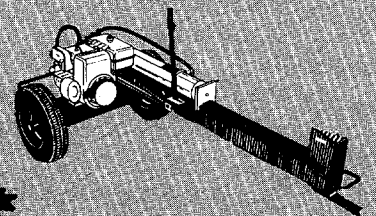
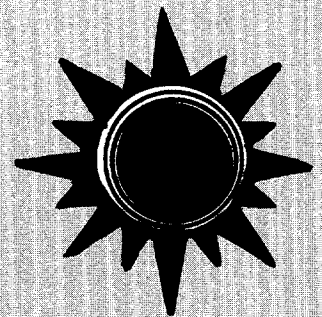
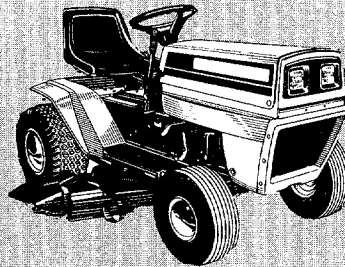
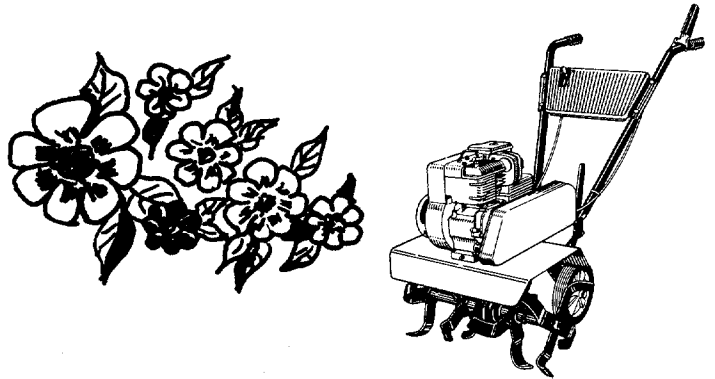
# OWNER'S MANUAL

## 21" SELF- PROPELLED ROTARY MOWERS

**Model Numbers**  
**122-290A**  
**122-296A**

**Important:**  
**Read Safety Rules and**  
**Instructions Carefully**

Thank you for purchasing an  
American built product.



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## LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.



**WARNING**

### TO PURCHASERS OF INTERNAL COMBUSTION ENGINE EQUIPPED MACHINERY OR DEVICES IN THE STATE OF CALIFORNIA

The equipment which you have just purchased does not have a spark arrester. If this equipment is used on any forest covered land, brush covered land, or grass covered unimproved land in the State of California, before using on such land, the California law requires that a spark arrester be provided. In addition, spark arrester is required by law to be in effective working order. The spark arrester must be attached to the exhaust system and comply with Section 4442 of the California Public Resources Code.



## WARNING

To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

# SAFE OPERATION PRACTICES FOR WALK-BEHIND MOWERS

## TRAINING

1. It is suggested that this manual be read in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future reference and for ordering replacement parts.
2. Your rotary mower is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.
3. Read this Owner's Manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
4. Never allow children to operate a power mower. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
5. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of foreign objects, a small object may have been overlooked and could be accidentally thrown by the mower in any direction and cause injury.

## PREPARATION

1. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones and other foreign objects which could be picked up and thrown by the mower in any direction and cause injury.
2. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
3. Do not wear loose fitting clothing that could get caught on the mower.
4. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the gasoline tank indoors, while the engine is running, or while the engine is still hot. Wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
5. Disengage the self-propelled mechanism or drive clutch on units so equipped before starting the engine.
6. Never attempt to make a wheel or cutting height adjustment while the engine is running.
7. Mow only in daylight or in good artificial light.
8. Never operate the equipment in wet grass. Always be sure of your footing. Keep a firm hold on the handle and walk, never run.

## OPERATION

1. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
2. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times as the rotating blade can cause injury.
3. Stop the blade when crossing gravel drives, walks or roads.

4. After striking a foreign object, stop the engine, remove the wire from the spark plug, and thoroughly inspect the mower for any damage. Repair the damage before restarting and operating the mower.
5. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
6. Stop the engine whenever you leave the mower, before cleaning the mower housing, and when making any repairs or inspections.
7. When cleaning, repairing or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting.
8. Before attempting to unclog the mower or discharge chute, stop the engine and be sure the blade has stopped completely. The cutting blade continues to rotate for a few seconds after the engine is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
9. Do not run the engine indoors.
10. Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher or unclogging chute.
11. Mow across the face of slopes, never up-and-down. Exercise extreme caution when changing direction on slopes. Do not mow excessively steep slopes.
12. Always disconnect electric mowers (line operated) before cleaning, repairing or adjusting.
13. Never operate mower without proper guards, plates or other safety protective devices in place.
14. Keep washout ports and other mower-housing service openings closed when mowing.

## MAINTENANCE AND STORAGE

1. Check the blade and engine mounting bolts at frequent intervals for proper tightness.
2. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
3. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
4. To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.
5. Check the grass catcher bag frequently for wear or deterioration. For safety protection, replace only with new bag meeting original equipment specifications.

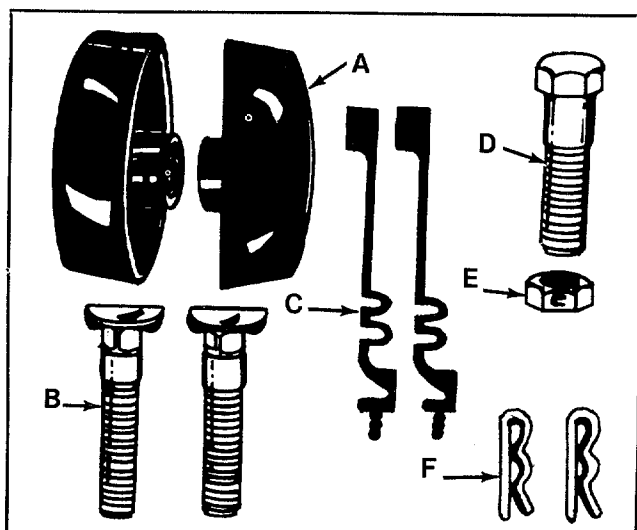


FIGURE 1.

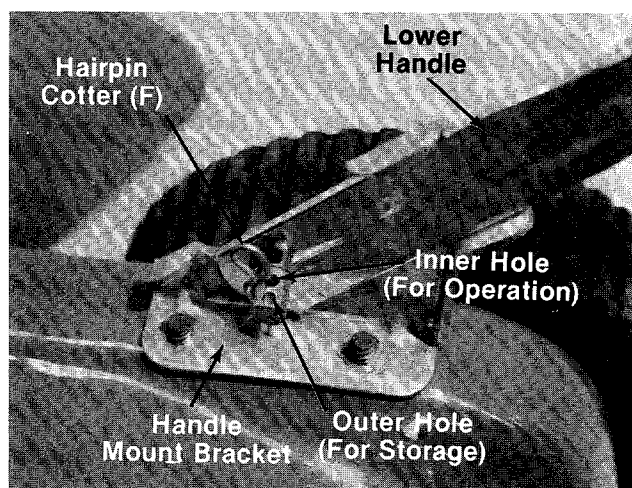


FIGURE 2.

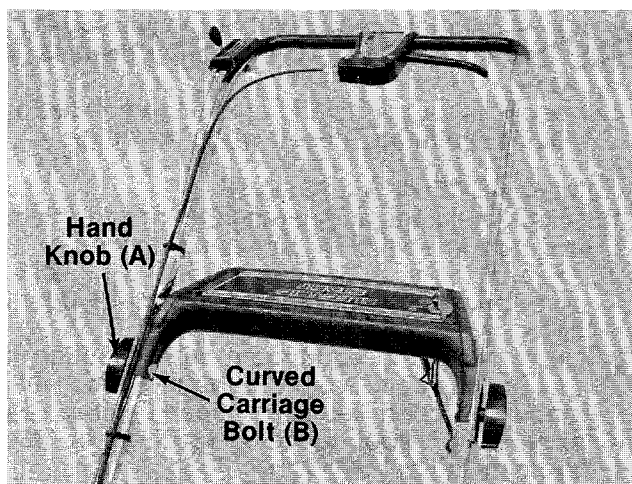


FIGURE 3.

## ASSEMBLY INSTRUCTIONS



### NOTE

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see operating section of this manual for proper fuel and engine oil recommendations.

### Contents of Hardware Pack: (See Figure 1)

- A (2) Hand Knobs
- B (2) Curved Carriage Bolts 5/16-18 x 1.75" Long
- ← C (2) Cable Ties
- D (1) Hex Bolt 1/4-20 x 1.50" Long
- E (1) Hex Center Lock Nut 1/4-20 Thd.
- F (2) Hairpin Cotter
- G (2) Ignition Keys (296 only) (Not Shown)
- H (1) Battery Charger (296 only) (Not Shown)

1. Remove the lawn mower, loose parts, hardware pack and literature from the carton. Make certain all parts and literature have been removed before the carton is discarded.
2. Extend the throttle control which is attached to the mower and place on the floor. Be careful not to bend or kink control wire.
3. Place lower handle in position over weld pins in handle mount brackets on deck. Secure by placing two hairpin cotters (F) in inner hole on weld pins. See figure 2.
- ←



### NOTE

It may be necessary to spread the ends of the lower handle outward slightly to obtain a snug fit against the brackets.



### NOTE

There are two (2) holes in the handle mount brackets. Place hairpin cotter in the inner hole for operation. The outer hole is for storage.

4. There are two height positions for the handle. Place upper handle (with the clutch control attached) in position over lower handle. Select hole for either high or low position. Refer to figure 14. Hold the handle panel in place (on model 296 only). Secure with two curved carriage bolts (B) and hand knobs (A) as shown in figure 3. The knobs must be to the outside of the handle.
- ←

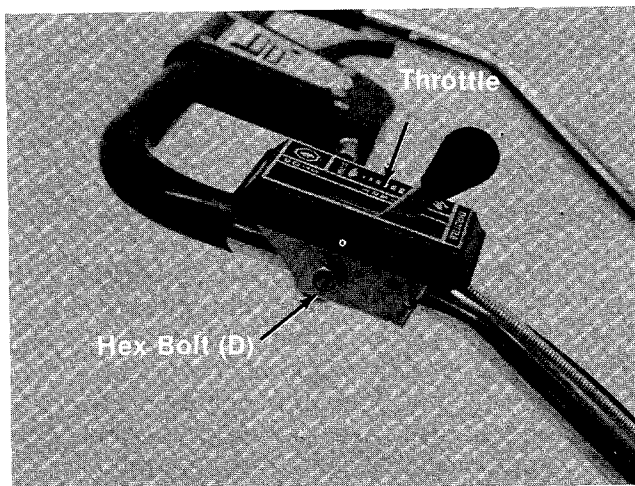


FIGURE 4.

5. Place the throttle control in position on the **right** hand side of upper handle. Secure with hex bolt (D) and hex lock nut (E) provided. See figure 4.



Reference to left or right side of machine is from operator's position at the handle facing forward.

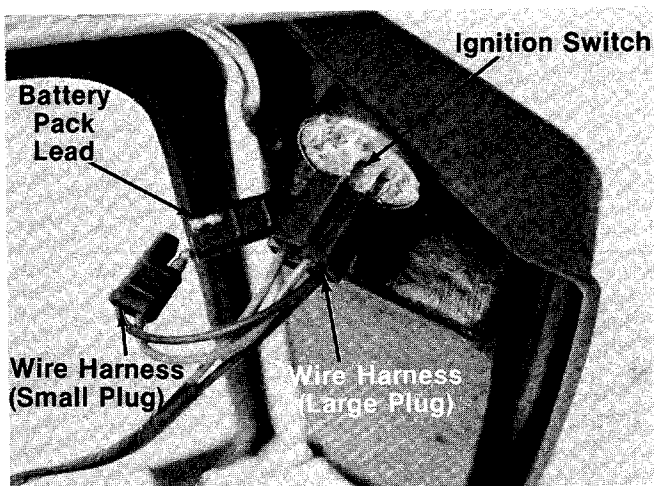


FIGURE 5.

6. **Model 296 only**—Plug the wire harness (large plug) into the ignition switch and plug the (small plug) wire harness into the battery pack lead. See figure 5.

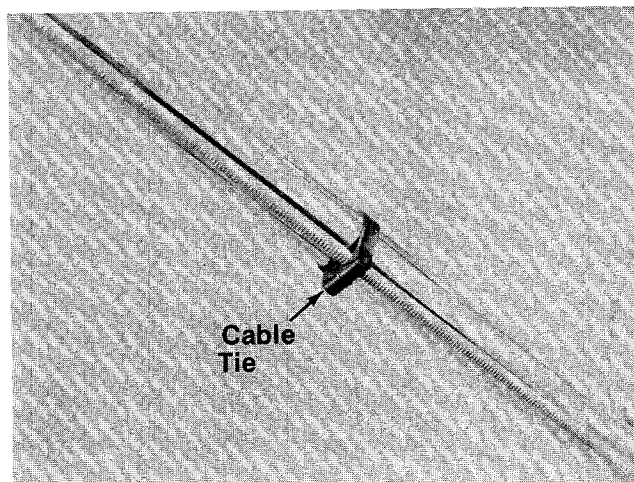


FIGURE 6.

7. Secure cables to upper and lower handles with cable ties (C) provided. See figure 6.
8. Check **all** nuts and bolts for correct tightness.



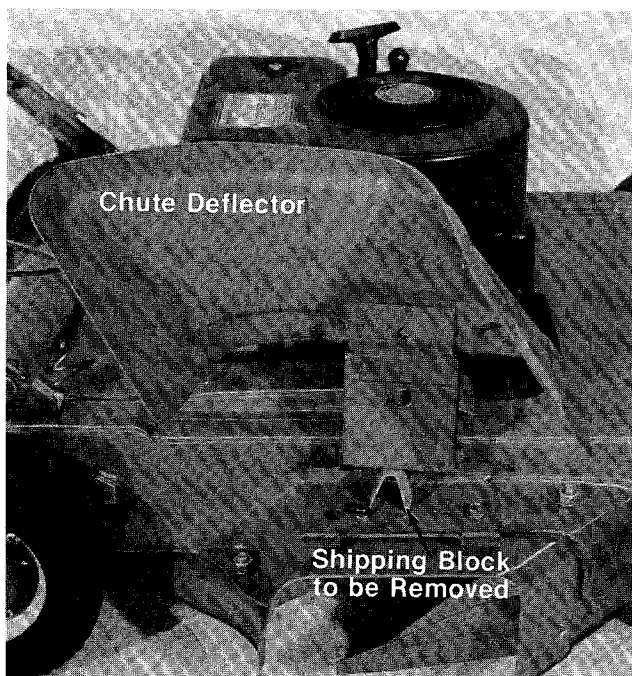


FIGURE 7.



#### CAUTION

Please note that the chute deflector on your mower is in an upright position. It is held in that position by a shipping block. This block is used for shipping purposes only. It must be removed and discarded before your mower is put into operation. See figure 7.

## CONTROLS

### THROTTLE CONTROL

The throttle control is located on the right side of the handle. See figure 8. It is used to regulate the engine speed and to **stop** the engine.

### CLUTCH CONTROL

Squeezing the clutch control engages the drive mechanism to the rear wheels. Releasing the clutch control stops the rear wheels from driving. Release the clutch control to slow down when negotiating an obstacle, making a turn or stopping. See figure 8.



#### WARNING

The blade continues to rotate when the clutch is released.

### IGNITION SWITCH (Model 296 Only)

The ignition switch is located on the left hand side of handle panel. It is used for **starting only**. See figure 8.

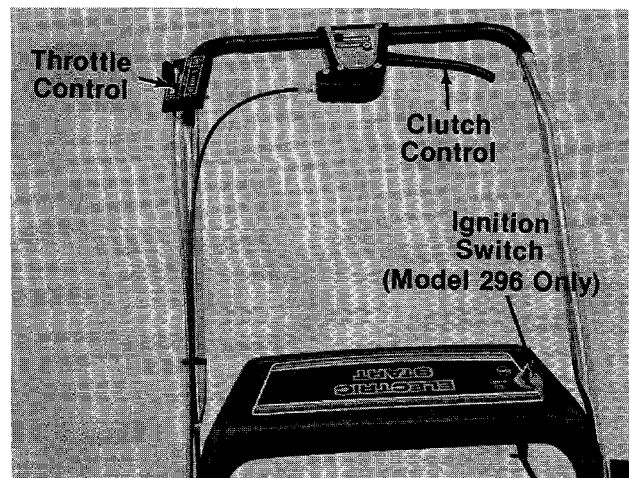


FIGURE 8.

## OPERATION

### Caution

**Do Not Operate Mower Unless Guard Or Grass Catcher Is In Its Proper Place.**



FIGURE 9.

Keep hands and feet away from the chute area on cutting deck. See figure 9.



### NOTE

For shipping purposes your mower is set with the wheels in a low cutting height position. For best results, raise the cutting position until it is determined which height is best for your lawn. See adjustment section.

### BEFORE STARTING

1. **Model 296 Only (Electric Start)**—The battery pack must be charged a minimum of 16 hours for the first time and not more than 20 hours.



### NOTE

Only use battery charger provided with mower.

- A. Unplug the wire harness from the battery pack. See figure 10.
- B. Always connect charger lead to battery pack lead before inserting battery charger plug into household outlet.
- C. After charging, disconnect battery charger plug from household outlet first.

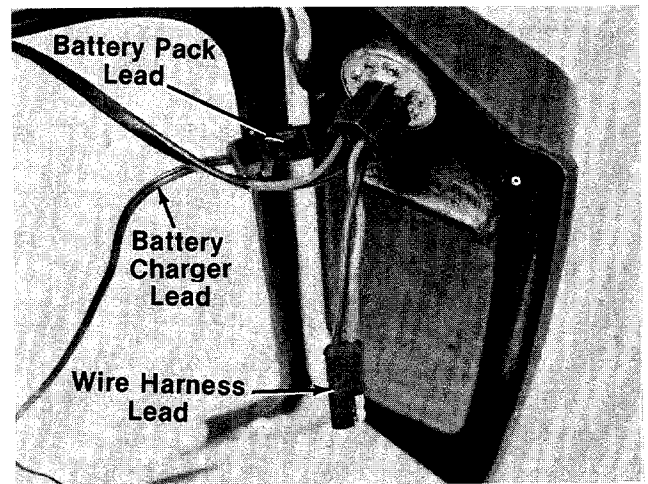


FIGURE 10. Model 296



### WARNING

If battery pack is removed from handle panel for replacement only, **Do Not** separate the batteries for any reason. Dispose of batteries properly.

**Do Not** put batteries in fire or mutilate; may burst or release toxic materials. Electrolyte contains sulfuric acid. **Do Not** short circuit; may cause burns.

When replacing battery pack in handle panel, battery pack must be positioned with the positive terminal to the left hand side and the negative terminal to the right hand side of panel. See figure 11.

Replacing the battery pack incorrectly will cause serious damage.

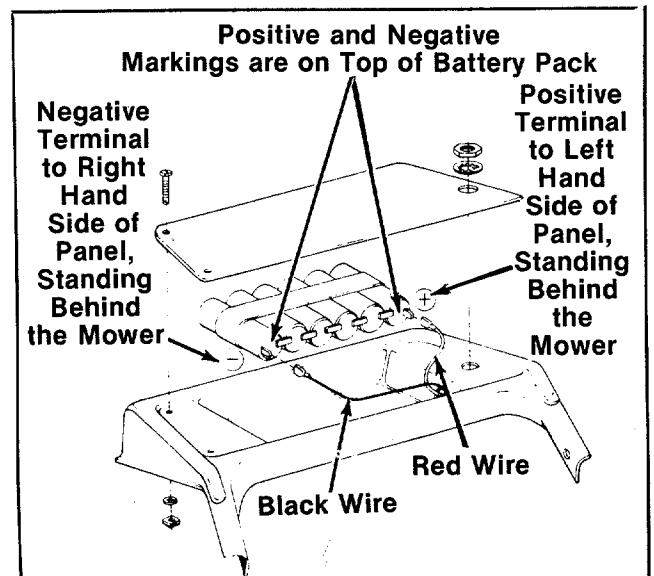


FIGURE 11. Model 296

2. Before each use, check for proper clutch operation by performing the following before starting engine:

With the clutch control released, push mower forward. It should move freely.

Pull mower backward. It should move freely.

If it does not and the rear wheels tend to lock up, the clutch may not be releasing completely. Do not attempt to start the engine until corrections have been made. Check the control cable for severe bend, kinks or binding.

Correct and adjust as required. See adjustment section. Test again.

3. Check to see that the handle is in the operating detent in the brackets on the deck, and the upstop projections restrict the handle from moving up and forward. If necessary, remove the left side from the mounting pin on the deck bracket. Push outward on the sides of the handle until it fits snug against the handle brackets. Reinstall over the mounting pin and secure the hairpin cotter in the inner holes.
4. Fill sump with oil, using type and quantity of oil as instructed in the separate engine manual.
5. Fill fuel tank, using clean, fresh **regular** grade automotive gasoline. Fill tank completely.  
**DO NOT MIX OIL WITH GASOLINE.**

## TO START ENGINE

### Model 290

1. Move throttle control lever to "START" position.
2. Place foot on the left side of the deck and hold handle to prevent tipping the unit. Grasp starter handle and pull out rapidly. Return it slowly to the engine. Repeat if necessary.

### Model 296 (Electric Start)

1. Move throttle control lever to "START" position.
2. Turn ignition key to "START" position.
3. After engine starts, move throttle control lever to desired speed.



When starting the unit, place the unit facing a solid object to stop it if it is not correctly adjusted to be in "NEUTRAL" position. If the unit shows signs of motion without engaging the clutch control, shut off the engine immediately. Readjust the clutch control as necessary. See adjustment section.

This mower is designed to be operated at full throttle to give you the best cut and do the most effective job of bagging the cut grass.

## TO STOP ENGINE

1. Move throttle control lever to "STOP" position. On electric start model, turn ignition key to "OFF" position and remove the key.
2. Remove spark plug wire from spark plug and ground to prevent accidental starting while equipment is unattended.

Be sure that lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine. For best results and to insure more even grass distribution, do not mow when lawn is excessively wet.



If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.

## USING YOUR ROTARY MOWER

For the best results, do not cut wet grass because it tends to stick to the underside of the mower, preventing proper discharge of grass clippings. If wet grass must be cut, reduce walking speed to help distribute the clippings more effectively.

New grass, thick grass or wet grass may require a narrower cut. Blade speed should be adjusted to the condition of the lawn.

The best mowing pattern is one that allows the clippings to discharge towards the uncut part of the lawn. This permits recutting of the clippings to further pulverize them. When cutting high weeds, discharge towards cut portion then recut at right angles to first direction.

For best results, cut off one-third or less of the total length of the grass. Lawn should be cut in the fall as long as there is growth.



# ADJUSTMENTS



## CAUTION

Do not at any time make any adjustment to lawn mower without first stopping engine and disconnecting spark plug wire.

### CUTTING HEIGHT

A single lever adjusts all four wheels at one time. Cutting height adjustment is made by moving the height adjustment lever away from the engine and then forward or backward. The lever will lock in one of seven cutting heights, from 1" to 3". See figure 12.

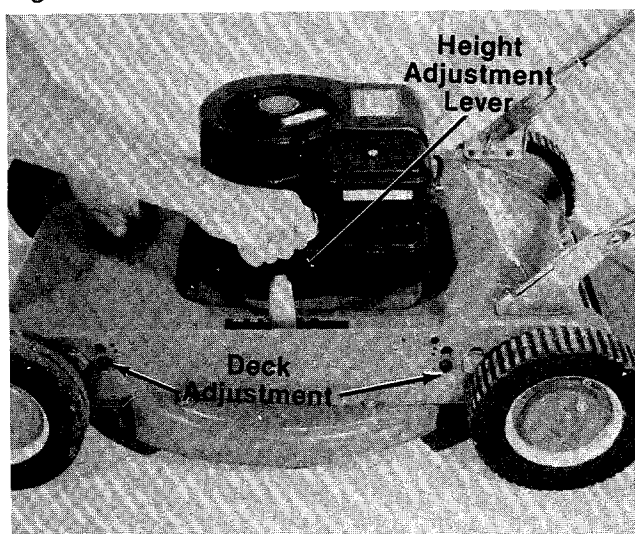


FIGURE 12.

### CUTTING DECK ADJUSTMENT

An adjustment is provided on the left side of the upper deck, next to the front and rear wheels, so that an even cut may be obtained. This adjustment compensates for wear or use of the grass catcher. See figure 12.

To level the deck, loosen (do not remove) the self-tapping screw. Depress the pivot bracket so that the tab comes out of the adjustment hole. Pivot the bracket up or down as necessary, selecting one of the five adjustment holes. Release the bracket, and tighten the self-tapping screw securely. Both front and rear brackets should be in the same relative position.

### CLUTCH CONTROL ADJUSTMENT

1. To increase belt tension, loosen jam nut and back off two or three threads. Thread the barrel nut on end of control cable outward two or three threads. Retighten jam nut. See figure 13.

2. To decrease belt tension, loosen jam nut and back off two or three threads. Thread the barrel nut on end of control cable inward two or three threads. Retighten jam nut. See figure 13.

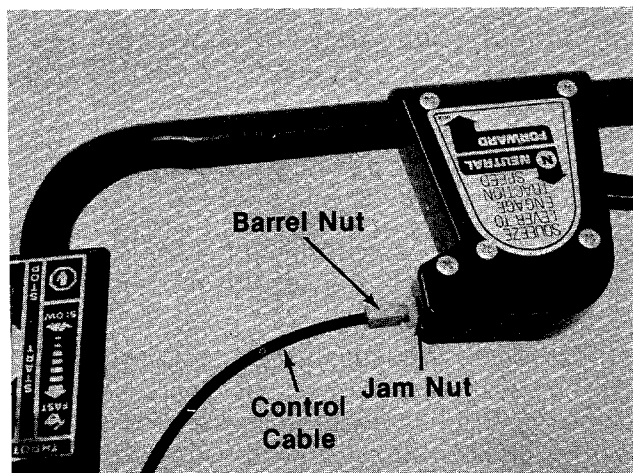


FIGURE 13.

### THROTTLE

If adjustment becomes necessary, the throttle control wire assembly can be reset as follows:

1. Loosen, but do not remove, the screw securing throttle control wire assembly at engine.
2. Move throttle control lever on handle to "FAST" position.
3. Move lever, to which control wire is fastened at engine, to full open position. Retighten screw to secure throttle control wire assembly.

### HANDLE POSITION

The upper handle can be adjusted to a high or low position. The operator of the lawn mower can easily adjust the handle position by unscrewing the two knobs, removing the two bolts and reassembly in the other position. No tools are necessary to make this adjustment. See figure 14.

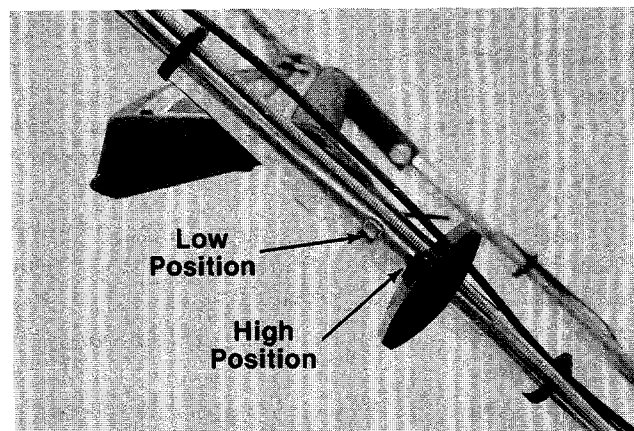


FIGURE 14.

## CARBURETOR ADJUSTMENTS



### WARNING

If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustments may be required to compensate for differences in fuel, temperature, altitude and load.

All carburetor adjustments should be made with the air cleaner on engine. Air cleaner mounting screw must be in carburetor when engine is run. Best adjustment is made with a fuel tank half full of gasoline.

To adjust carburetor, refer to the separate engine manual packed with your unit.

## LUBRICATION



### IMPORTANT

Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on lawn mower.

**Wheels**—Lubricate periodically ball bearings on front wheels with light oil. Rear drive wheels are equipped with Fortiflex bearings. They require no lubrication. If front or rear wheels are removed for any reason, lubricate the axle surface with light oil. A 4 oz. plastic bottle of light oil lubricant is available. Order part number 737-0170. Engine oil may also be used.

**Chute Deflector**—The torsion spring and pivot point should be lubricated periodically with light oil to prevent any rust or binding. Deflector must work freely.

**Throttle**—Periodically lubricate throttle control lever and throttle wire assembly with a few drops of light oil for ease of operation.

**Engine**—See engine manual for lubrication instructions.

**Protective Shield**—The pivot points on the protective shield should be lubricated periodically with light oil to prevent any rust or binding.

**Chain**—Periodically lubricate the chain by removing the master link, soaking the chain in kerosene or a solvent, letting it air dry and wiping the chain with a rag saturated with SAE 30 oil. Reassemble the chain to the sprockets. Closed end of the master link clip should face in direction of chain travel.

If the rotary mower is operated in a sandy area, the chain should not be lubricated. Excessive oil on a chain will collect dirt and cause excessive wear on the chain and sprockets.

**Rear Wheel Drive**—Both rear wheels are driven by a pawl and ratchet drive. Lubricate the pawl and ratchet once a season with a silicone type lubricant.

Figure 15 shows the right rear hub cap. To take off the rear hub caps, remove the four screws around the edge of the hub cap. A cotter pin holds the ratchet in place. The pawl must pivot freely. Clean with a solvent, replace any broken or worn parts and lubricate.

The pawl and ratchet on the left rear hub cap are assembled facing the opposite way.

After reassembling, test the operation of the drive without the engine running. Engage the clutch and pull the mower backwards. Both wheels should lock. Push the mower forward and both wheels should rotate.



### NOTE

The wheels will “click” when the mower is pushed forward.

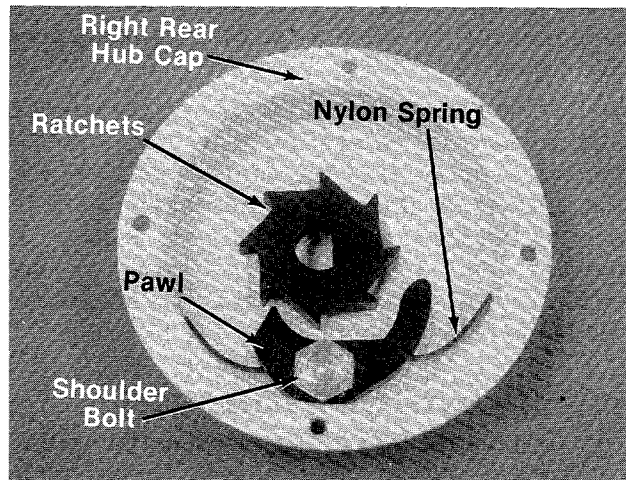


FIGURE 15.

# MAINTENANCE

## CUTTING BLADE

### A. Removal for Sharpening or Replacement



Be sure to disconnect and ground the spark plug wire before working on the cutting blade to prevent accidental engine starting.

1. Remove the large bolt and lock washer which holds the blade and adapter to the engine crankshaft.
2. Remove the blade and adapter from the crankshaft. Be careful not to lose the key on the crankshaft.
3. If the blade or blade adapter needs replacing, remove the two small bolts, lock washers and nuts which hold the blade to the adapter.

### B. Sharpening

Remove the cutting blade by following the directions of the preceding section.

When sharpening the blade, follow the original angle of grind as a guide. It is **extremely important** that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. An unbalanced blade will cause excessive vibration when rotating at high speeds and may cause damage to the mower and could break, causing personal injury.

The blade can be tested for balance by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly.



### NOTE

It is recommended that the blade always be removed from the adapter for the best test of balance.

### C. Reassembly

Before reassembling the blade and the blade adapter to the unit, lubricate the engine crankshaft and the inner surface of the blade adapter with light oil. Lubricating the bolt holes, bolts and inner surface of the nuts with light oil is also recommended. A 4 oz. plastic bottle of light oil lubricant is available. Order part number 737-0170. Engine oil may also be used.

When replacing the blade, be sure to install the blade with the side of the blade marked "Bottom" (or with part number) facing the ground when the mower is in the operating position. Make certain key is in place on the crankshaft.

### Blade Mounting Torque

3/8" Dia. Bolt 375 in. lb. min., 450 in. lb. max.

5/16" Dia. Bolt 150 in. lb. min., 250 in. lb. max.

To insure safe operation of your unit, ALL nuts and bolts must be checked periodically for correct tightness.

### DECK

The underside of mower deck should be cleaned after each period of use as grass clippings, leaves, dirt and other matter will accumulate. This accumulation of grass clippings, etc., is undesirable as it will invite rust and corrosion and may cause an uneven discharge of grass clippings at the next cutting.

The deck may be cleaned by tilting the mower forward or on its side and scraping clean with a suitable tool or by washing with a stream of water from a garden hose.



### CAUTION

Do not direct the stream of water at a hot engine as damage to the engine may result.

### ENGINE OIL

Check oil level before starting engine and after every 5 hours of operation. Add oil as necessary to keep level full to point of overflowing or to full mark on dipstick. Before removing oil fill plug, clean area around plug to prevent dirt from entering oil fill tube. Engine should be in a level position when checking oil.

Change oil after first 5 hours of operation. Thereafter change every 25 hours. Change oil while engine is warm. Oil may be drained thru the oil fill tube by tipping the mower on its side.

### AIR CLEANER

Service air cleaner every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.

## SPARK PLUG

The spark plug should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specifications.

## BELT REPLACEMENT



### IMPORTANT

Always stop engine and disconnect spark plug wire before performing any repairs or maintenance on the mower.

1. Place a piece of plastic film under the gasoline cap and tighten it. The plastic prevents gasoline from draining from the air vent in the cap.
2. Tip the mower forward. Place the handle of the mower against a bench so that the bottom of the deck can be reached.
3. Remove the center bolt on the blade and slide off the blade and adapter. See figure 16.



### NOTE

Do not lose the key on the crankshaft.

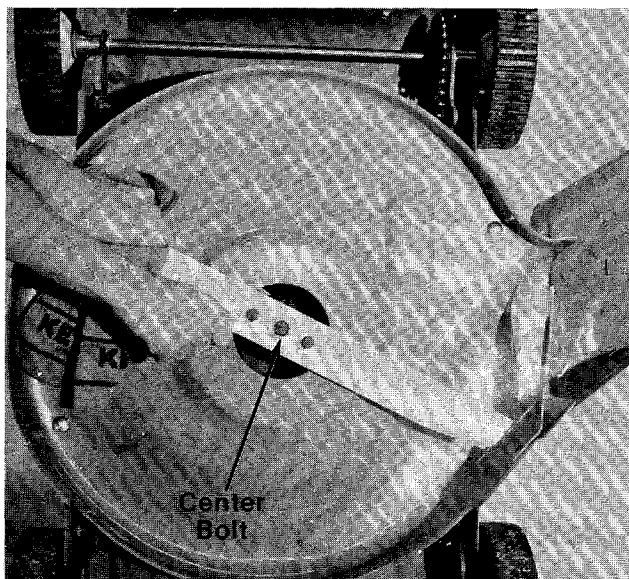


FIGURE 16.

4. Remove the four carriage bolts holding the lower deck to the frame. See figure 17.

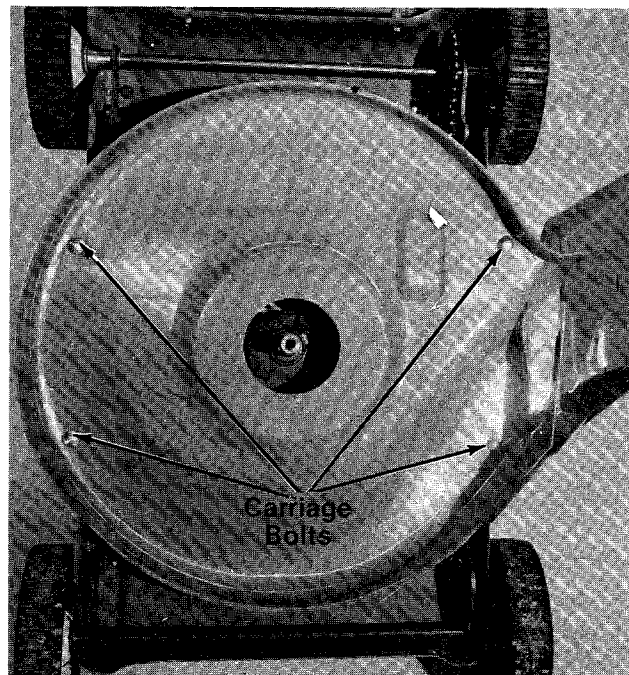


FIGURE 17.

5. Remove the two screws holding the belt guard cover on top of the deck. See figure 18.

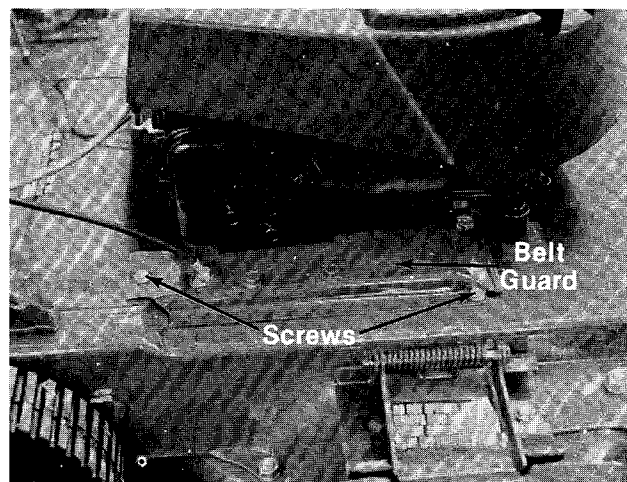


FIGURE 18.

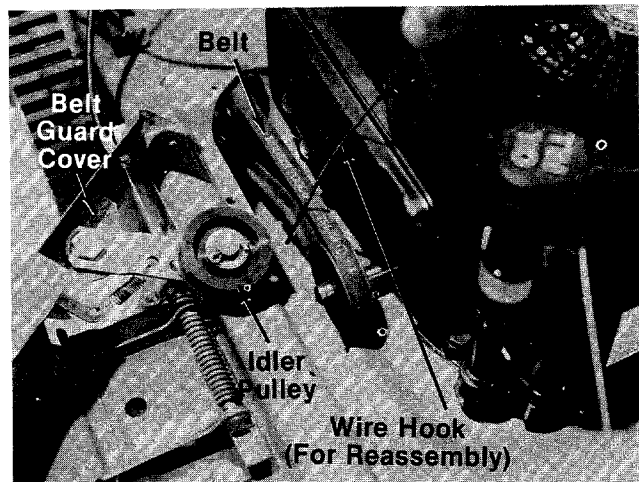
6. Unhook the belt from the idler pulley. See figure 19.



### NOTE

When reassembling the idler pulley and belt guard cover, place a wire hook under the belt. Pull up on the hook, and slip the idler pulley under belt. See figure 19.

7. Remove the belt from the engine pulley.



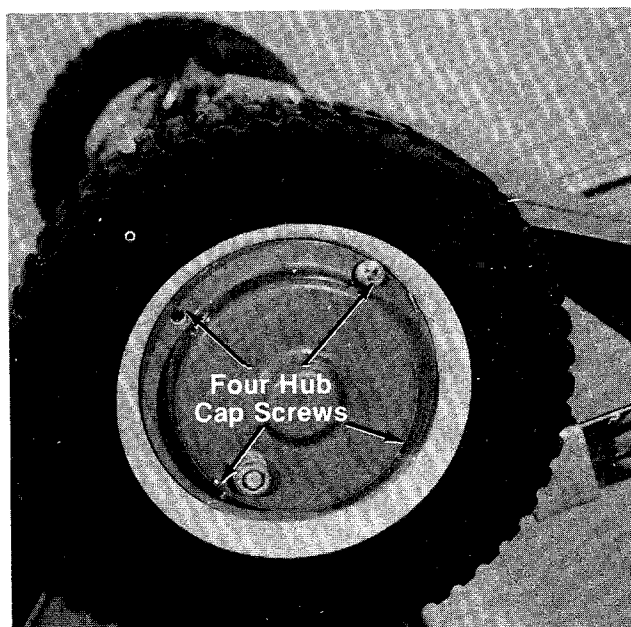
**FIGURE 19.**

8. Remove both rear wheel hub caps by removing the four screws on each one. See figure 20.



**NOTE**

Mark the hub caps right and left. They are not interchangeable.



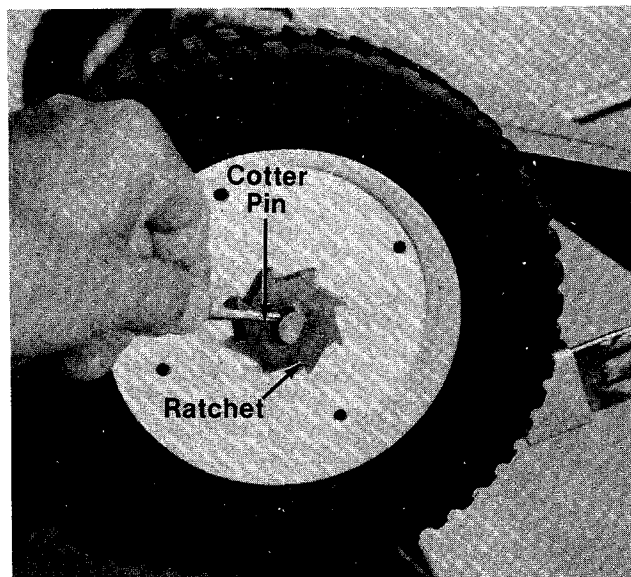
**FIGURE 20.**

9. Remove the cotter pin on the **RIGHT WHEEL ONLY** and remove the ratchet. See figure 21.



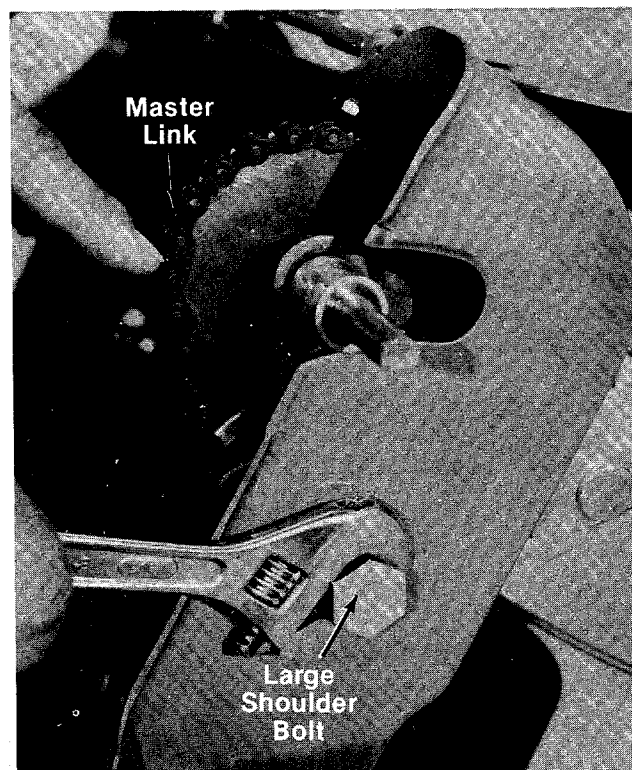
**NOTE**

Mark the outside of the ratchet so it is not assembled backwards or refer to figure 21 for reassembly.



**FIGURE 21.**

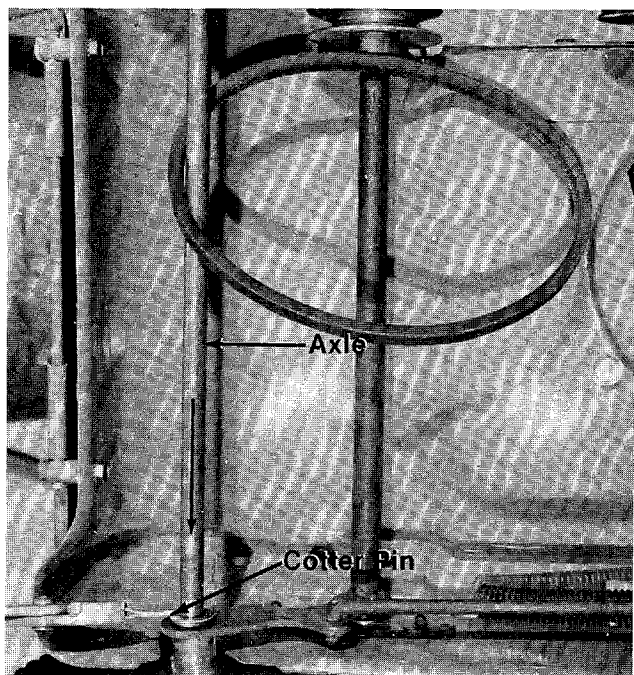
10. Remove the large shoulder bolt and chain master link. See figure 22.



**FIGURE 22.**

11. Remove the cotter pin next to the bearing by the left wheel and slide the axle to the left. The belt can be removed. See figure 23.



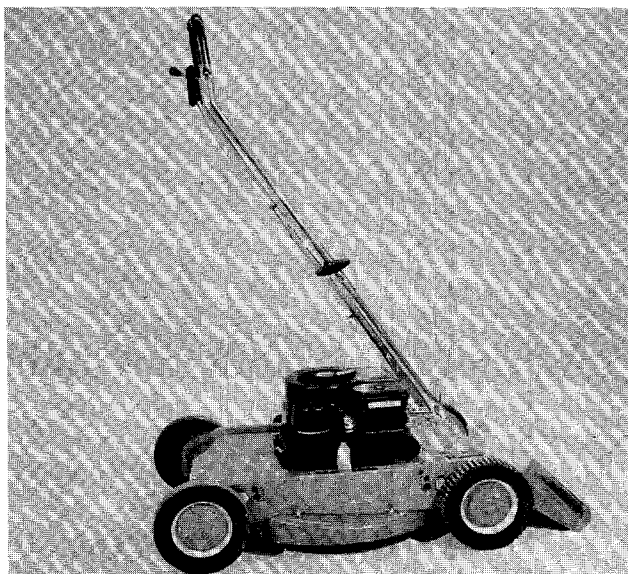


**FIGURE 23.**

12. Reassemble in reverse order with new belt.
13. Remove plastic film from gas tank cap.

## HANDLE STORAGE

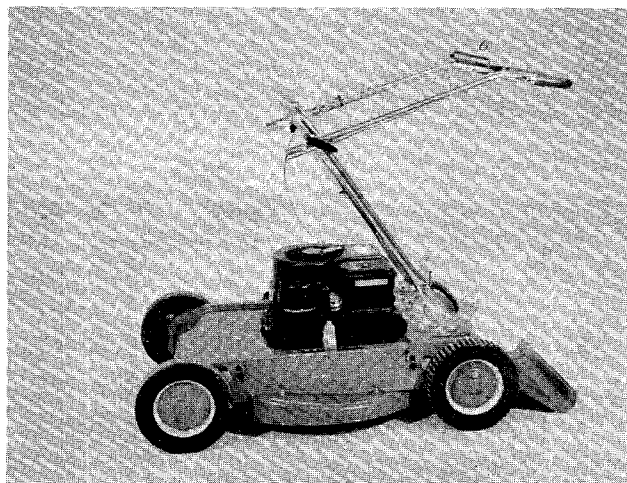
The handle can be stored in an upright position to take less space. See figure 24. Move hairpin cotter pins to outer hole on weld pins (see figure 2). Grasp the lower handle at the bottom and press inward. Tip the handle forward. It will lock in this position. Reverse this procedure to place the handle in the operating position. See figure 24.



**FIGURE 24.**

The handle on these models may also be folded away completely for storage. See figures 24, 25 and 26.

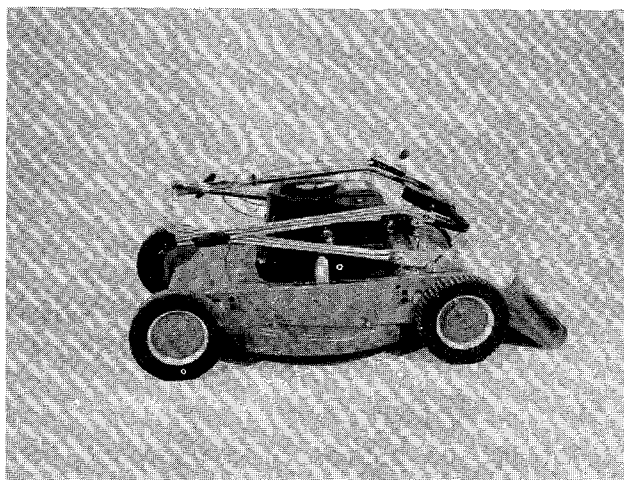
1. Remove hairpin cotter pins from inner hole on weld pins on handle mount brackets. Place in outer hole.
2. Loosen the two hand knobs on each side of the handle.
3. Pull inward on the bottom of each side of the lower handle, and push forward.
4. Fold the upper handle back and down, as shown.



**FIGURE 25.**

To take the handle out of storage position, proceed as follows.

1. Lift the upper handle up and towards the rear as shown.
2. Pull the handle back until it locks into the operator's position.



**FIGURE 26.**



3. Tighten the two hand knobs securely.
4. Move the hairpin cotters in the inner hole on the weld pins.

## OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, the following procedures are recommended:

1. Working outdoors, drain all fuel from the fuel tank. Use a clean dry cloth to absorb the small amount of fuel remaining in the tank. Then run the engine until all fuel in the carburetor is exhausted.



**WARNING**

Do not drain fuel while smoking, or if near an open fire.

2. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm). Refill the crankcase with clean new oil.

3. Disconnect the spark plug wire and remove the spark plug from the cylinder. Pour about 2 or 3 tablespoons of engine oil into the cylinder. Turn the engine over several times to spread out the oil. Replace the spark plug, but do not connect the wire.

4. Clean the engine and the entire mower thoroughly.

5. Lubricate all lubrication points.



**NOTE**

The use of any accessory on this Rotary Mower other than those manufactured by the mower manufacturer is **not** recommended.

GRASS CATCHER Model 004 is available as optional equipment for the mower shown in this manual.



**WARNING**

1. The mower should not be operated without the entire grass catcher or chute deflector in place.
2. The mower should not be operated without the protective shield on the rear of the deck in place.



**NOTE**

Under normal usage bag material is subject to wear and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations.

For replacement bags, use only factory authorized replacement bag No. 764-0176.

# TROUBLE SHOOTING CHART

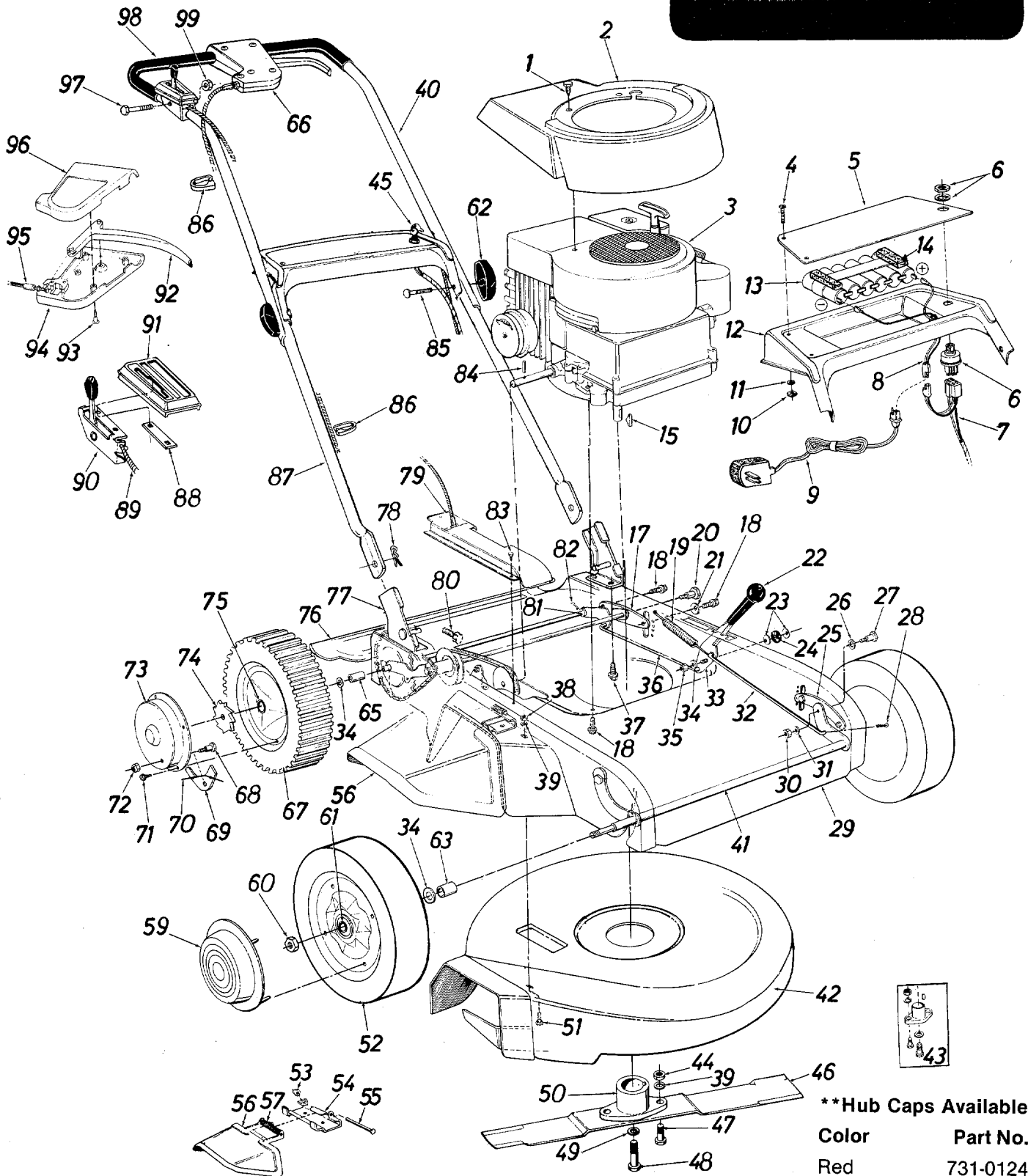
Problem	Cause	Remedy
1 Engine fails to start	<p><b>A</b> Check fuel tank for gas</p> <p><b>B</b> Spark plug lead wire disconnected</p> <p><b>C</b> Throttle control lever not in the starting position</p> <p><b>D</b> Faulty spark plug</p> <p><b>E</b> Carburetor improperly adjusted Engine flooded</p> <p><b>F</b> Old, stale gasoline</p>	<p><b>A</b> Fill tank if empty.</p> <p><b>B</b> Connect lead wire.</p> <p><b>C</b> Move throttle lever to start position.</p> <p><b>D</b> Spark should jump gap between control electrode and side electrode. If spark does not jump, replace the spark plug.</p> <p><b>E</b> Remove spark plug, dry the plug, crank engine with plug removed and throttle in off position. Replace spark plug and lead wire and resume starting procedures.</p> <p><b>F</b> Drain tank and refill with fresh gasoline.</p>
2 Hard starting or loss of power	<p><b>A</b> Spark plug wire loose</p> <p><b>B</b> Carburetor improperly adjusted</p> <p><b>C</b> Dirty air cleaner</p>	<p><b>A</b> Connect and tighten spark plug wire.</p> <p><b>B</b> Adjust carburetor. See engine manual.</p> <p><b>C</b> Clean air cleaner as described in the engine manual.</p>
3 Operation erratic	<p><b>A</b> Dirt in gas tank</p> <p><b>B</b> Dirty air cleaner</p> <p><b>C</b> Water in fuel supply</p> <p><b>D</b> Vent in gas cap plugged</p> <p><b>E</b> Carburetor improperly adjusted</p>	<p><b>A</b> Remove the dirt and fill tank with fresh gas.</p> <p><b>B</b> Clean air cleaner as described in the engine manual.</p> <p><b>C</b> Drain contaminated fuel and fill tank with fresh gas.</p> <p><b>D</b> Clear vent or replace gas cap.</p> <p><b>E</b> Adjust carburetor. See engine manual.</p>
4 Occasional skip (hesitates) at high speed	<p><b>A</b> Carburetor idle speed too slow</p> <p><b>B</b> Spark plug gap too close</p> <p><b>C</b> Carburetor idle mixture adjustment improperly set</p>	<p><b>A</b> Adjust carburetor. See engine manual.</p> <p><b>B</b> Adjust to .030".</p> <p><b>C</b> Adjust carburetor. See engine manual.</p>
5 Idles poorly	<p><b>A</b> Spark plug fouled, faulty, or gap too wide</p> <p><b>B</b> Carburetor improperly adjusted</p> <p><b>C</b> Dirty air cleaner</p>	<p><b>A</b> Reset gap to .030" or replace spark plug.</p> <p><b>B</b> Adjust carburetor. See engine manual.</p> <p><b>C</b> Clean air cleaner as described in the engine manual.</p>
6 Engine overheats	<p><b>A</b> Carburetor not adjusted properly</p> <p><b>B</b> Air Flow restricted</p> <p><b>C</b> Engine oil level low</p>	<p><b>A</b> Adjust carburetor. See engine manual.</p> <p><b>B</b> Remove blower housing and clean as described in the engine manual.</p> <p><b>C</b> Fill crankcase with the proper oil.</p>
7 Excessive vibration	<p><b>A</b> Cutter blade loose or unbalanced</p>	<p><b>A</b> Tighten blade and adapter. Balance blade.</p>

# NOTES

A large, empty rectangular box with a black border, occupying the majority of the page below the 'NOTES' header. It is intended for handwritten notes.

# Models 290 and 296

IF YOU WRITE TO US ABOUT THIS ARTICLE  
OR IF YOU ORDER REPLACEMENT PARTS AL-  
WAYS MENTION THIS MODEL & SERIAL NO  
MODEL



\*\*Hub Caps Available

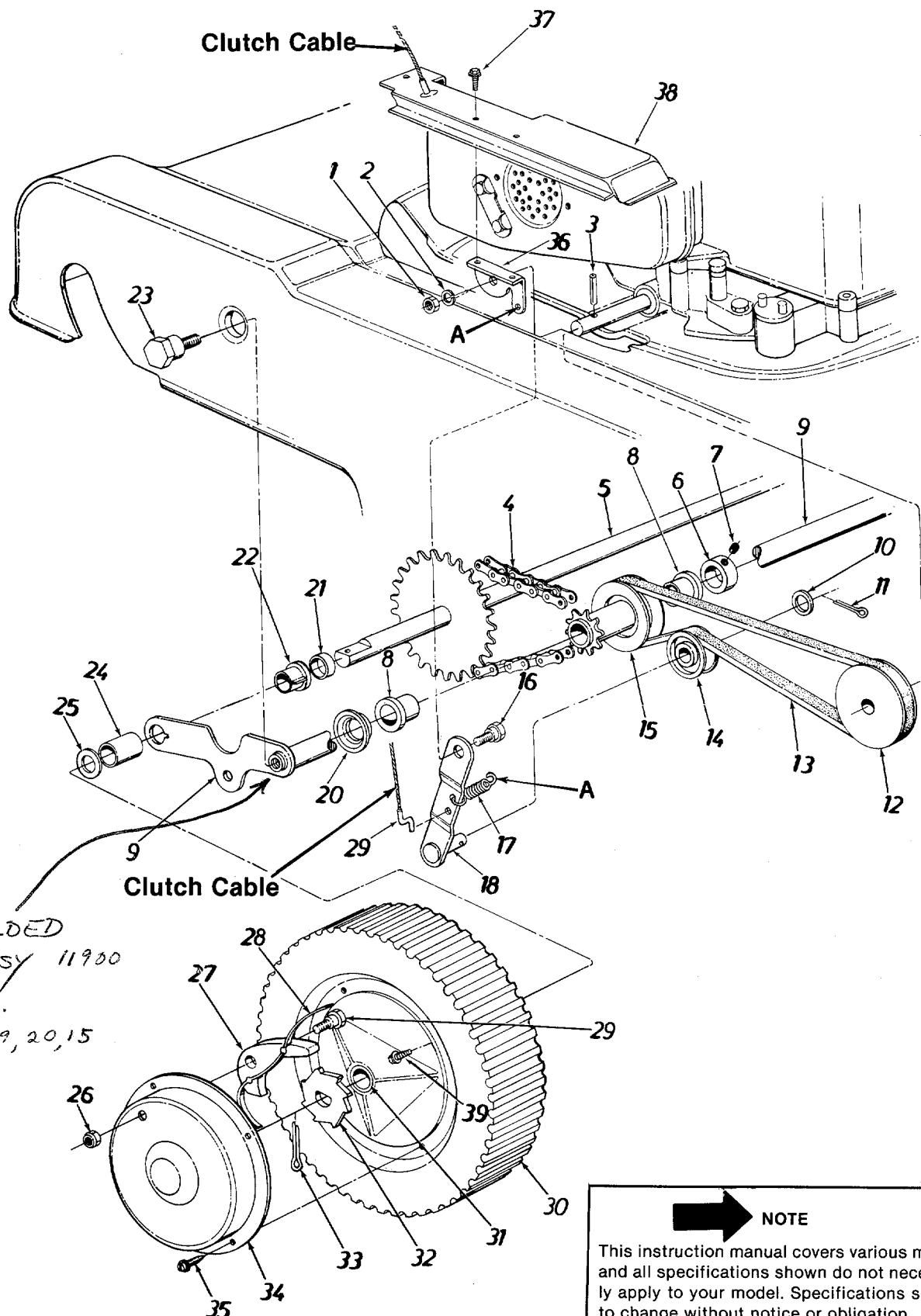
Color	Part No.
Red	731-0124
Orange	731-0254
Black	731-0354
Gray	731-0355

# Models 290 and 296

## PARTS LIST FOR MODELS 290 AND 296 ROTARY MOWERS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0227		Slot Hd. Wash. Hd. Scr. #8 x .50" Lg.		51	710-0260		Carriage Bolt 5/16-18 x .62" Lg.*	
2	731-0276		Engine Shroud		52	734-0874		Front Wheel Ass'y.—Comp.	
3	—		Engine		53	726-0106		Push-On Flange Palnut	
4	710-0783		Hex Wash. Hd. Slotted Scr. #8-32 x .38" Lg. (296)		54	11130 —462		Adapter Plate	
5	14222		Battery Plate (296)		55	711-0555		Pivot Pin	
6	725-0267		Ignition Switch (296)		56	11679 —462		Chute Deflector Ass'y. Comp.	
7	725-0736		Wire Harness (296)		57	732-0253		Torsion Spring	
8	725-0725		Battery Pack Lead (296)		59	**		Hub Cap—Front Wheel	
9	725-0727		Battery Charger (296)		60	712-0200		Hex Jam Nut 1/2-20 Thd.	
10	712-0142		Hex Nut #8-32 Thd. (296)		61	741-0180		Ball Bearing—Front Wheel	
11	736-0168		External L-Wash. #8" I.D. (296)		62	09966		Hand Knob	
12	731-0504		Handle Panel (296)		63	748-0190		Wheel Spacer	
13	725-0726		Battery Pack (296)		65	750-0190		Wheel Spacer	
14	722-0135		P.V.C. Foam Strip (296)		66	14177		Clutch Control Ass'y. Comp.	
15	714-0365		#6 Hi-Pro Key		67	734-0880		Rear Wheel Ass'y—Comp.	
16	12935		Handle Mount Bracket		68	738-0137		Shoulder Bolt—Special	
17	14190		Rear Pivot Bracket		69	748-0188		Pawl	
18	710-0654		Hex Wash. Hd. Scr. 3/8-16 x .88" Lg.*		70	10622		Nylon Spring	
19	732-0121		Spring		71	710-0748		Pan Hd. AB-Tap Scr. #12 x .50" Lg.*	
20	738-0149		Shoulder Bolt—Special		72	712-0219		Hex Elastic Stop Nut 1/4-20 Thd.	
21	736-0105		Belleville Washer		73	10647		Hub Cap—Rear Wheel	
22	720-0143		Grip—Height Adjuster		74	748-0187		Ratchet	
23	736-0105		Belleville Washer		75	741-0262		Fortiflex Brg.—Rear Wheel	
24	735-0126		Rubber Washer		76	12251 —462		Rear Protective Shield Ass'y.—Comp.	
25	14189		Front Height Pivot Brkt. Ass'y.		77	12936		Handle Mount Bracket	
26	736-0221		Int. L-Wash. .38" I.D.		78	714-0104		Hairpin Cotter	
27	736-0149		Shoulder Bolt—Special		79	14186 —462		Belt Guard Cover	
28	714-0507		Cotter Pin 3/32 x .75" Lg.*		80	710-0567		Hex Sems Bolt 1/4-28 x .62" Lg.	
29	14184 —462		Upper Deck Ass'y.		81	748-0142		Flange Bearing	
30	712-0798		Hex Nut 3/8-16 Thd.*		82	714-0115		Cotter Pin 1/8" Dia. x 1.00" Lg.*	
31	736-0169		L-Wash. 3/8" I.D.*		83	710-0224		Hex Hd. Self-Tap Scr. #10 x .50" Lg.*	
32	10080		Rod—Height Adjuster		84	715-0105		Spring Pin Spiral 3/16" Dia. .50" Lg.	
33	10666		Height Adjuster Lever		85	710-0405		Curved Hd. Bolt 5/16-18 x 1.75" Lg.	
34	736-0160		Flat Washer		86	726-0192		Cable Tie	
35	712-0711		Hex Jam Nut 3/8-24 Thd.*		87	749-0449		Lower Handle (Chrome)	
36	10080		Rod—Height Adjuster			749-0448		Lower Handle (Painted)	
37	710-0603		Hex Wash. Hd. Scr. 5/16 x .50" Lg.		88	726-0134		Speed Nut (Twin Type)	
38	712-0267		Hex Nut 5/16-18 Thd.*		89	746-0381		Conduit and Wire	
39	736-0119		L-Wash. 5/16" I.D.*		90	746-0380		Throttle Control Ass'y.— Comp.	
40	749-0382		Upper Handle (Chrome)		91	731-0344		Plastic Label	
	749-0381		Upper Handle (Painted)		92	731-0406		Clutch Lever	
41	10662		Front Axle Ass'y.		93	710-0535		Screw #10 x 1.00" Lg.*	
42	11425 —462		Lower Deck Ass'y.		94	731-0408		Front Cover	
43	10769		Blade Adapter Kit		95	746-0382		Clutch Control Cable	
44	712-0123		Hex Nut 5/16-24 Thd.*		96	731-0407		Rear Cover	
45	725-0201		Ignition Key (296)		97	710-0606		Hex Bolt 1/4-20 x 1.50" Lg.*	
46	742-0124		21" Blade		98	718-0145		Grip	
47	710-0117		Hex Bolt 5/16-24 x 1.00" Lg.—H.T.		99	712-0107		Hex Cent. L-Nut 1/4-20 Thd.	
48	710-0459		Hex Bolt 3/8-24 x 1.50" Lg.—H.T.						
49	736-0217		L-Wash. 3/8" I.D.—Heavy Duty						
50	10769		Blade Adapter Kit						

# Models 290 and 296





# Models 290 and 296

## PARTS LIST FOR MODELS 290 AND 296 ROTARY MOWERS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	712-0267		Hex Nut 5/16-18 Thd.*	
2	736-0119		L-Wash. 5/16" I.D.*	
3	715-0105		Spring Pin Spiral 3/16" Dia. x .50" Lg.	
4	713-0144		Roller Chain #48 x 15.5" Lg.	
	713-0122		Master Link #48	
5	11866		Rear Shaft Ass'y.	
6	711-0169		Collar 5/8" I.D.	
7	710-0421		Set Screw 5/16 x .25" Lg. Cup Point	
8	741-0249		Bearing	
9	11900		Rear Axle Ass'y. (Includes Ref. Nos. 6, 7, 8, 15 and 20)	
10	736-0160		Flat Washer	
11	714-0115		Cotter Pin 1/8" Dia. x 1.00" Lg.*	
12	756-0115		Pulley for P.T.O.	
13	754-0114		"V"-Belt 1/2 x 24" Lg.	
14	756-0360		Plastic Idler Pulley	
15	756-0191		Pulley with Sprocket	
16	738-0255		Shoulder Bolt .375" Dia. x .171 Lg.	
17	732-0357		Idler Spring	
18	14181		Idler Bracket Ass'y.	
19	746-0382		Clutch Control Cable	
20	10665		Spacer	
21	711-0494		Spacer	
22	748-0142		Bearing	
23	738-0149		Shoulder Bolt .625" Dia. x .425" Lg.	
24	750-0190		Spacer .70" x .87" O.D. x 1.00" Lg.	
25	736-0160		Flat Washer	
26	712-0219		Hex Elastic Stop Nut 1/4-20 Thd.	
27	748-0188		Pawl—Rear Wheel	
28	10622		Nylon Spring	
29	738-0137		Shoulder Bolt—Special	
30	734-0880		Wheel Ass'y.—Rear	
31	741-0262		Flange Bearing (2 Per Wheel)	
32	748-0187		Ratchet—Rear Wheel	
33	714-0115		Cotter Pin 1/8" Dia. x 1" Lg.*	
34	10647 —462		Hub Cap—Rear	
35	710-0748		Pan Hd. AB-Tap Scr. #12 x .50" Lg.*	
36	14245		Idler Mounting Bracket	
37	710-0776		Hex Wash. Hd. AB-Tap Scr. 1/4-20 x .62" Lg.	
38	14186 —462		Belt Guard Cover	
39	710-0200		Hex Wash. Hd. Self-Tap Scr. #8 x .50" Lg.	

(462—Red Flake)

\*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

When ordering parts, if color or finish is important use the appropriate color code shown above. (e.g. Red Flake Finish—11428 (462).)

The engine is not under warranty by the mower manufacturer. If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."

Find It Fast  
In The  
Yellow Pages

# PARTS INFORMATION

## POWER EQUIPMENT PARTS AND SERVICE

Parts and service for all MTD manufactured power equipment are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quantity of each part required.

**NOTE:** If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

<b>ALABAMA</b>	<b>BIRMINGHAM</b>
Auto Electric & Carburetor Co. ....	2625 4th Ave. S. ....35233
<b>ARKANSAS</b>	<b>FORT SMITH</b>
Mity Mite Motors, Inc. ....	4515 S. 16th St. ....72901
	<b>NORTH LITTLE ROCK</b>
Sutton's Lawn Mower Shop ....	Rt. 4, Box 368 ....72117
<b>CALIFORNIA</b>	<b>PORTERVILLE</b>
Billious ....	75 North D Street ....93257
<b>COLORADO</b>	<b>DENVER</b>
Spitzer Industrial Products Co. ....	6601 N. Washington St., Box 29114 ....80229
<b>FLORIDA</b>	<b>JACKSONVILLE</b>
Radco Distributors ....	4909 Victor St., Box 5459 ....32207
	<b>OPA LOCKA</b>
Small Eng. Dist. ....	2351 N.W. 147th St. ....33054
<b>GEORGIA</b>	<b>EAST POINT</b>
East Point Cycle & Key ....	2834 Church St. ....30344
<b>ILLINOIS</b>	<b>LYONS</b>
Keen Edge Co. ....	8615 Ogden Ave. ....60534
<b>INDIANA</b>	<b>ELKHART</b>
Parts & Sales Inc. ....	2101 Industrial Pkwy. ....46514
<b>IOWA</b>	<b>DUBUQUE</b>
Power Lawn & Garden Equip. ....	2551 J.F. Kennedy ....52001
<b>LOUISIANA</b>	<b>NEW ORLEANS</b>
Suhren Engine Co. ....	8330 Earhart Blvd. ....70118
<b>MARYLAND</b>	<b>TAKOMA PARK</b>
Center Supply Co. ....	6867 New Hampshire Ave. ....20012
<b>MASSACHUSETTS</b>	<b>SPRINGFIELD</b>
Morton B. Collins Co. ....	300 Birnie Ave. ....01107
<b>MICHIGAN</b>	<b>LANSING</b>
Lorenz Service Co. ....	2500 S. Pennsylvania ..48910
	<b>MOUNT CLEMENS</b>
Power Equipment Dist. ....	340 Hubbard ....48043
<b>MINNESOTA</b>	<b>HOPKINS</b>
Hance Distributing Inc. ....	420 Excelsior Ave. W. ....55343
<b>MISSISSIPPI</b>	<b>BILOXI</b>
Biloxi Sales & Service, Inc. ....	506 Caillavet St. ....39533
<b>MISSOURI</b>	<b>KANSAS CITY</b>
Automotive Equip. Service ....	3117 Holmes St. ....64109
	<b>ST. JOSEPH</b>
Ross-Frazier Supply Co. ....	8th and Monterey ....64503
	<b>ST. LOUIS</b>
Henzler, Inc. ....	2015 Lemay Ferry Rd. ....63125
<b>NEW JERSEY</b>	<b>BELLMAWR</b>
Lawnmower Parts Inc. ....	717 Creek Rd. ....08030
<b>NEW MEXICO</b>	<b>ALBUQUERQUE</b>
Spitzer Eng. & Parts ....	1023 Third St. N.W. ....87103
<b>NEW YORK</b>	<b>CARTHAGE</b>
Gamble Dist., Inc. ....	West End Ave. ....13619

## BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and serv. should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline**, Briggs & Stratton or Tecumseh Lauson.

<b>NORTH CAROLINA</b>	<b>GOLDSBORO</b>
Smith Hardware Co. ....	515 N. George St. ....27530
	<b>GREENSBORO</b>
Dixie Sales Company ....	335 N. Green ....27402
<b>OHIO</b>	<b>CARROLL</b>
Stebbe's Mid-State Mower Supply .	71 High St., Box 366 ....43112
	<b>CLEVELAND</b>
Bleckrie, Inc. ....	7900 Lorain Ave. ....44102
	<b>WADSWORTH</b>
National Central ....	687 Seville Rd. ....44281
	<b>YOUNGSTOWN</b>
Burton Supply Co. ....	1301 Logan Ave., Box 929 ....44501
<b>OKLAHOMA</b>	<b>MUSKOGEE</b>
Victory Motors, Inc. ....	605 S. Cherokee ....74401
<b>OREGON</b>	<b>PORTLAND</b>
Kenton Supply Co. ....	8216 N. Denver Ave. ....97217
<b>PENNSYLVANIA</b>	<b>HARRISBURG</b>
EECO Inc. ....	4021 N. 6th St. ....17110
	<b>PHILADELPHIA</b>
Thompson Rubber Co. ....	5222-24 N. Fifth St. ....19120
	<b>PITTSBURGH</b>
Bluemont Co. ....	11125 Frankstown Rd. ....15235
	<b>PUNXSUTAWNEY</b>
Frank Roberts & Sons ....	R.D. 2 ....15767
<b>TENNESSEE</b>	<b>KNOXVILLE</b>
Master Repair Service ....	2000 Western Ave. ....37
	<b>MEMPHIS</b>
American Sales & Service, Inc. ....	3035-43 Bellbrook ....38110
<b>TEXAS</b>	<b>DALLAS</b>
Marr Brothers, Inc. ....	423 E. Jefferson ....75203
	<b>FORT WORTH</b>
Woodson Sales Corp. ....	1702 N. Sylvia ....76111
	<b>HOUSTON</b>
Bullard Supply Co. ....	2409 Commerce St. ....77003
<b>UTAH</b>	<b>SALT LAKE CITY</b>
A-1 Engine & Mower Co. ....	437 E. 9th St. ....84111
<b>VERMONT</b>	<b>BURLINGTON</b>
Vermont Hdwe. Co. Inc. ....	180 Flynn Ave. ....05401
<b>VIRGINIA</b>	<b>ASHLAND</b>
RBI Corp. ....	Lake Ridge Park, 101 Cedar Run Dr. ....23005
<b>WASHINGTON</b>	<b>SEATTLE</b>
Bailey's Inc. ....	1414 14th Ave. ....98102
<b>WEST VIRGINIA</b>	<b>CHARLESTON</b>
Young's, Inc. ....	233 Virginia St., E. ....25301
<b>WISCONSIN</b>	<b>MARSHFIELD</b>
Power Pac ....	301 E. 29th St. ....54449

## WARRANTY PARTS AND SERVICE POLICY

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

### CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. Replacement of Missing Parts on new equipment.
2. Replacement of Defective Parts within the warranty period.
3. Repair of Defects within the warranty period.

All claims MUST be substantiated with the following information:

1. Model Number of unit involved.
2. Date unit was purchased or first put into service.
3. Date of failure.
4. Nature of failure.